

Mayor

From: Laurie.Scarmuzzi@dot.ohio.gov
Sent: Tuesday, February 11, 2020 7:51 AM
To: Mayor; City Engineer Personal; Willoughby Hills Finance Dept.
Cc: Gary.Benesh@dot.ohio.gov; Erika.Kenzig@dot.ohio.gov; Eric.Kallio@dot.ohio.gov
Subject: PID 111157; D12-GR-FY2020 Safety; Willoughby Hills; Preliminary Legislation
Attachments: 111157_2020-01-15_WilloughbyHills_PL.pdf; 111157_FHWA_Memo_Guardrail_20150526.pdf; 111157_Guardrail_Map-WilloughbyHills.pdf

Mayor Gardner,

The Ohio Department of Transportation has initiated a project to upgrade guardrail end treatments at locations on the National Highway System (NHS) that are within your jurisdiction as shown on the attached Guardrail Location Map. This project is necessary in order to comply with the safety policy issued by the Federal Highway Administration (FHWA) (see attached FHWA Memorandum dated May 26, 2015).

The entire cost and expense to upgrade the guardrail end treatments will be provided by the Department. Upon completion of the project, the Local Public Agency (LPA) will be responsible for the maintenance of the upgraded guardrail end treatments.

Attached is a draft preliminary legislation for the improvement to **upgrade guardrail end treatments at one (1) location along SOM Center Road (SR-91) in the City of Willoughby Hills. This work is part of a larger ODOT project to upgrade guardrail end treatments on National Highway System routes within Cuyahoga and Lake counties.**

If you wish the Ohio Department of Transportation to proceed with the proposed work, please have the legislation enacted by the City as soon as possible and return (2) original signature certified copies to this office. Upon full execution by the State, an original copy will be returned to you for your files.

A hard copy by mail will not follow unless requested. If you have any questions, please contact this office at your convenience.

Laurie Scarmuzzi

Transportation Engineer 2, Planning

ODOT District 12: Cuyahoga, Geauga & Lake Counties

5500 Transportation Blvd., Garfield Heights, OH 44125

216.584.2132

transportation.ohio.gov



PRELIMINARY LEGISLATION

RC 5521.01

ORDINANCE No. _____

PID No. _____

111157

CTY-RTE-SEC _____

D12-GR-FY2020 SAFETY

The following is an ordinance enacted by the City of Willoughby Hills, Lake County, Ohio, hereinafter referred to as the Local Public Agency (LPA), in the matter of the stated described project.

SECTION I - Project Description

WHEREAS, the STATE has identified the need for the described project:

Upgrade guardrail end treatments on SOM Center Road (SR-91) in the City of Willoughby Hills. This work is part of a larger ODOT project to upgrade guardrail end treatments on National Highway System routes within Cuyahoga and Lake counties.

NOW THEREFORE, be it ordained by the Council of the City of Willoughby Hills, Ohio.

SECTION II - Consent Statement

Being in the public interest, the LPA gives consent to the Director of Transportation to complete the above described project.

SECTION III - Cooperation Statement

The LPA shall cooperate with the Director of Transportation in the above described project as follows:

The entire cost and expense of the construction will be provided by the Department. No financial participation will be required by the LPA.

The LPA agrees to pay One Hundred Percent (100%) of the cost of those features requested by the LPA which are determined by the State and Federal Highway Administration to be unnecessary for the Project.

SECTION IV - Utilities and Right-of-Way Statement

The LPA agrees to acquire and/or make available to ODOT, in accordance with current State and Federal regulations, all necessary right-of-way required for the described Project. The LPA also understands that right-of-way costs include eligible utility costs. The LPA agrees to be responsible for all utility accommodation, relocation, and reimbursement and agrees that all such accommodations, relocations, and reimbursements shall comply with the current provisions of 23 CFR 645 and the ODOT Utilities Manual.

SECTION V - Maintenance

Upon completion of the described Project, and unless otherwise agreed, the LPA shall: (1) provide adequate maintenance for the described Project in accordance with all applicable State and Federal law, including, but not limited to, Title 23, U.S.C., Section 116; (2) provide ample financial provisions, as necessary, for the maintenance of the described Project; (3) maintain the right-of-way, keeping it free of obstructions; and (4) hold said right-of-way inviolate for public highway purposes.

SECTION VI - Authority to Sign

The Mayor of said City is hereby empowered on behalf of the City to enter into agreements with the Director of Transportation necessary to complete the above described project.

Passed: _____, 2020
DATE

Attested: _____
CLERK

MAYOR

Attested: _____
Title:

PRESIDENT OF COUNCIL

This ordinance is hereby declared to be an emergency measure to expedite the highway project(s) and to promote highway safety. Following appropriate legislative action, it shall take effect and be in force immediately upon its passage and approval, otherwise it shall take effect and be in force from and after the earliest period allowed by law.

CERTIFICATE OF COPY
STATE OF OHIO

The City of Willoughby Hills, Lake County, Ohio

I, _____, as Clerk of the City of Willoughby Hills, Ohio, do hereby certify that the foregoing is a true and correct copy of an ordinance adopted by the legislative Authority of the said City of Willoughby Hills on the _____ day of _____, 202____, that the publication of such ordinance has been made and certified of record according to law; that no proceedings looking to a referendum upon such ordinance have been taken; and that such ordinance and certificate of publication thereof are of record in _____, Page _____.

IN WITNESS WHEREOF, I have hereunto subscribed my name and affixed my official seal, if applicable, this _____ day of _____, 202____.

CLERK
CITY OF WILLOUGHBY HILLS, OHIO

(SEAL)
(If Applicable)

The foregoing is accepted as a basis for proceeding with the project herein described.

For the City of Willoughby Hills, Ohio

Attest: _____, Date _____
MAYOR

For the State of Ohio

Attest: _____, Date _____
DIRECTOR, OHIO DEPARTMENT OF TRANSPORTATION



Memorandum

Subject: **ACTION:** Roadside Safety Hardware

Date: MAY 26 2015

From: Tony Furst
Associate Administrator

In Reply Refer To:
HSST

To: Division Administrators
Federal Lands Division Engineers
Safety Field

Purpose

The purpose of this memorandum is to bring to your attention two primary issues related to guardrail end terminals that will require you to take action. As you are aware, we have been closely examining the performance of guardrail end terminals. It's recognized that there are installation and maintenance challenges with these devices. As the construction season starts, and after the heavy winter, this is the appropriate time to pay particular attention to installation and maintenance issues. In this memo, FHWA emphasizes the need to have in place policies and procedures to evaluate the selection of roadside safety hardware relative to the roadway type, configuration and terrain; ensure its proper installation and maintenance; and periodically evaluate its in-service condition. In addition, we are aware there are some obsolete, non-crashworthy guardrail end terminals that still exist on the nation's highway system. We have raised awareness regarding these terminals through previous memoranda issued over a number of years. We strongly recommend that you encourage the removal of pre-NCHRP-350 guardrail end terminals.

Background

It is FHWA policy that roadside safety hardware installed on the National Highway System (NHS) should be in compliance with the crash testing and evaluation criteria contained in the Manual for Assessing Safety Hardware (MASH) or its predecessor the National Cooperative Highway Research Program (NCHRP) Report 350. Devices that are compliant with either of these two sets of criteria are currently considered crashworthy devices.

It is critical that devices be installed and maintained properly so they are in the best position to perform as designed and tested. Attached is a technical brief titled "Selection, Installation, and Maintenance of W-beam Guardrail End Terminals" which highlights general guidelines regarding the selection, installation, and maintenance of W-beam

guardrail end terminals. In addition, common issues of concern are identified with generally accepted practices to address these concerns.

Even when a successfully crash tested device is properly selected, installed, and maintained, individual crashes in the field are unique events and may result in performance that was not observed during crash testing. For this reason, a crash tested device should be monitored for its in-service performance, as indicated in both NCHRP 350 and MASH.

It is known that roadside safety hardware installed prior to the implementation of NCHRP 350 in 1993 remains on the NHS or other roadways across the nation. However, as indicated in the FHWA action memorandum, "Traffic Barrier Safety Policy and Guidance," dated 9/29/1994, non-crashworthy hardware should be removed and replaced with crashworthy roadside hardware at the earliest possible opportunity in concert with the maintenance of the roadway. It has been more than twenty years since that memo was issued and devices listed in that memo are still in service. We strongly recommend that pre-NCHRP 350 guardrail end terminals be removed and replaced.

Action

Please share this memorandum and its enclosure with your State DOT and any city, county or municipality in your State with responsibility for the operation and maintenance of their roadways.

Please ask them to review and, if necessary, update their policies, procedures, standards, and guidelines relative to the selection, installation, maintenance, and in-service evaluations of crashworthy roadside safety hardware on their roadways, specifically:

1. Relative to installation and maintenance of crashworthy roadside safety hardware, it is strongly recommended that they put in place the necessary protocols to ensure that any entity installing or maintaining roadside safety hardware, including contractors or State or local personnel, are capable (e.g., trained, credentialed or authorized by the roadside hardware manufacturer for the installation and maintenance of their hardware) of doing this work.
2. Review standard plans and specifications to ensure that only crashworthy devices are used on the National Highway System (NHS).

Finally, strongly encourage the highway agencies to increase their efforts to systematically upgrade pre-NCHRP 350 guardrail end terminals, particularly those that are on the NHS.

Resources

FHWA's Office of Safety and the Safety and Design Team in FHWA's Resource Center can provide training and technical assistance that focus on the proper selection, installation, and maintenance of guardrail end terminals to State Departments of Transportation (DOTs). Many states have taken advantage of this resource.

FHWA's Office of Safety will offer assistance to help set up pooled fund arrangements to conduct in-service performance evaluations.

For more information, accessing the above resources, or if you have questions or comments, please contact Will Longstreet at (202)366-0087 or Nick Artimovich at (202)366-1331.

References

- The September 29, 1994, FHWA memorandum, "[Traffic Barrier Safety Policy and Guidance](#)", called for replacement of "blunt ends" and discontinued the use of turned down ends and Breakaway Cable Terminals. The memorandum also suggested a policy to upgrade these terminals.
- The August 18, 1998, FHWA memorandum, "[National Cooperative Highway Research Program \(NCHRP\) Report 350 Hardware Compliance Dates](#)," announced the FHWA-AASHTO Implementation Plan for NCHRP Report 350 hardware. This plan required the upgrade of terminals not meeting NCHRP Report 350 as part of 3R projects on the NHS.
- The October 26, 2004, FHWA memorandum, "[Guidelines for the Selection of W-Beam Barrier Terminals](#)" identified several characteristics of W-beam terminals that need to be understood in order to select the appropriate system including site grading, type of terminal, and terminal layout.
- The November 17, 2005, FHWA memorandum, "[In-service Performance Evaluation and Continuous Monitoring of Roadside Safety Features](#)," identified the need to routinely conduct in-service performance evaluations of crash tested roadside safety hardware.
- The June 26, 2012, FHWA memorandum, "[AASHTO Roadside Design Guide 4th Edition](#)," encourages State DOTs to have a written roadside policy that aligns with the AASHTO Roadside Design Guide, 4th edition.

Attachment

- Technical brief titled "Selection, Installation, and Maintenance of W-Beam Guardrail End Terminals."